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Note. The requirements of this formula may be met by adding 1 gallon of lavender oil, N.F., and 66.5 pounds of U.S.P. quality soap concentrate containing 25 percent water to 100 gallons of alcohol and, after mixing, by adding thereto 33.5 pounds of water and again mixing.

- (b) Authorized uses. (1) As a solvent:
- 141. Shampoos.
- 210. External pharmaceuticals, not U.S.P. or N.F.
- 243. Liniments, U.S.P. or N.F.
- 410. Disinfectants insecticides, fungicides, and other biocides.
 - (2) Miscellaneous uses:
- 812. Product development and pilot plant uses (own use only).

§21.55 Formula No. 28-A.

(a) Formula. To every 100 gallons of alcohol add:

One gallon or any combination totaling 1 gallon of either gasoline, unleaded gasoline, heptane, or rubber hydrocarbon solvent.

- (b) Authorized uses. (1) As a fuel:
- 611. Automobile and supplementary fuels.
- 612. Airplane and supplementary fuels.
- 613. Rocket and jet fuels.
- 620. Proprietary heating fuels.
- 630. Other fuel uses.
 - (2) Miscellaneous uses:
- 812. Product development and pilot plant uses (own use only).

§21.56 Formula No. 29.

(a) Formula. To every 100 gallons of alcohol add:

One gallon of 100 percent acetaldehyde or 5 gallons of an alcohol solution of acetal-dehyde containing not less than 20 percent acetaldehyde, or 1 gallon of ethyl acetate having an ester content of 100 percent, or, where approved by the appropriate ATF officer, as to material and quantity, not less than 6.8 pounds if solid, or 1 gallon if liquid, of any chemical. When material other than acetaldehyde or ethyl acetate is proposed to be used, the user shall submit an application for such use to the appropriate ATF officer. The application shall include specifications, assay methods, and an 8-ounce sample of the substitute material for analysis.

- (b) Authorized uses. (1) As a raw material:
- 511. Vinegar.
- 512. Acetic acid.
- 521. Ethyl acetate.
- 522. Ethyl chloride.

- 523. Other ethyl esters.
- 530. Ethylamines.
 540. Dves and intermediates.
- 551. Acetaldehyde.
- 552. Other aldehydes.
- 561. Ethyl ether.
- 562. Other ethers
- 571. Ethylene dibromide.
- 572. Ethylene gas.
- 573. Xanthates
- 575. Drugs and medicinal chemicals.
- 579. Other chemicals.
- 580. Synthetic rubber.
- 590. Synthetic resins.
 - (2) Miscellaneous uses:
- 812. Product development and pilot plant uses (own use only).
- (c) Conditions governing use. This formula is restricted to processes in which the alcohol loses its identity by being converted into other chemicals.

§21.57 Formula No. 30.

(a) Formula. To every 100 gallons of alcohol add:

Ten gallons of methyl alcohol.

- (b) Authorized uses. (1) As a solvent:
- 011. Cellulose coatings.
- 012. Synthetic resin coatings.
- 021. Cellulose plastics.
- 022. Non-cellulose plastics, including resins.
- 031. Photographic film and emulsions.
- 035. Soldering flux.
- 036. Adhesives and binders.
- 042. Solvents and thinners (other than proprietary solvents or special industrial solvents).
- 051. Polishes.
- 052. Inks (not including meat branding inks).
- 53. Stains.
- 142. Soap and bath preparations.
- 331. Processing pectin.
- 332. Processing other food products.
- 341. Processing crude drugs.
- 342. Processing glandular products, vitamins, hormones, and yeasts.
- 343. Processing antibiotics and vaccines.
- 344. Processing medicinal chemicals (including alkaloids).
- 345. Processing blood and blood products.
- 349. Miscellaneous drug processing (including manufacture of pills).
- 352. Processing perfume materials and fixatives.
- 353. Processing photographic chemicals.
- 358. Processing other chemicals.
- 359. Processing miscellaneous products.
- 410. Disinfectants, insecticides, fungicides, and other biocides.
- 430. Sterilizing and preserving solutions.
- 440. Industrial detergents and soaps.

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- 450. Cleaning solutions (including household detergents).
- 481. Photoengraving and rotogravure solutions and dves.
- 482. Other dye solutions.
- 485. Miscellaneous solutions (including duplicating fluids).
 - (2) As a raw material:
- 575. Drugs and medicinal chemicals.
- 576. Organo-silicone products.
- 579. Other chemicals.
- 590. Synthetic resins.
- (3) As a fluid in:
- 740. Refrigerating uses.
- 750. Other fluid uses:
 - (4) Miscellaneous uses:
- 810. General laboratory and experimental use (own use only).
- 811. Laboratory reagents for sale.
- 812. Product development and pilot plant uses (own use only).

§ 21.58 Formula No. 31-A.

(a) Formula. To every 100 gallons of alcohol add:

One hundred pounds of glycerin (glycerol), U.S.P., and 20 pounds of hard soap, N.F. XI.

- (b) Authorized uses. (1) As a solvent:
- 113. Lotions and creams (hands, face, and body).
- 131. Tooth paste and tooth powder.
- 141. Shampoos.
 - (2) Miscellaneous uses:
- 812. Product development and pilot plant uses (own use only).

§ 21.59 Formula No. 32.

(a) Formula. To every 100 gallons of alcohol add:

Five gallons of ethyl ether.

- (b) Authorized uses. (1) As a solvent:
- 031. Photographic film and emulsions.
- 034. Cellulose intermediates and industrial collodions.
- 052. Inks (not including meat branding inks).
- 241. Collodion, U.S.P.
- 311. Ethyl cellulose compounds (dehydration).332. Processing miscellaneous food prod-
- ucts.
 342. Processing glandular products, vita-
- mins, hormones, and yeasts.
- 343. Processing antibiotics and vaccines.
- 344. Processing medicinal chemicals (including alkaloids).
- 430. Sterilizing and preserving solutions.

- 481. Photoengraving and rotogravure solutions and dyes.
 - (2) As a raw material:
- 522. Ethyl chloride.
- 523. Other ethyl esters.
- 561. Ethyl ether.
- 562. Other ethers.
- 571. Ethylene dibromide.
- 572. Ethylene gas.
- 575. Drugs and medicinal chemicals.
- 579. Other chemicals.
- 580. Synthetic rubber.
 - (3) Miscellaneous uses:
- 812. Product development and pilot plant uses (own use only).

§ 21.60 Formula No. 33.

(a) Formula. To every 100 gallons of alcohol add:

Thirty pounds of gentian violet or gentian violet, U.S.P.

- (b) Authorized uses. (1) As a solvent:
- 052. Inks (not including meat branding inks).
- 210. External pharmaceuticals, not U.S.P. or N.F.
- 249. Miscellaneous external pharmaceuticals, U.S.P. or N.F.
 - (2) Miscellaneous uses:
- 812. Product development and pilot plant uses (own use only).
- (c) Conditions governing use. Meat branding inks made with Formula No. 33 do not meet U.S. Department of Agriculture meat inspection specifications for use in Federally inspected establishments. Specially denatured alcohol Formulas No. 3-A, 3-C, and 23-A are authorized for this purpose.

§ 21.61 Formula No. 35.

- (a) Formula. To every 100 gallons of alcohol add:
- 29.75 gallons of ethyl acetate having an ester content of 100 percent by weight or the equivalent thereof not to exceed 35 gallons of ethyl acetate with an ester content of not less than 85 percent by weight.
 - (b) Authorized uses. (1) As a solvent:
- 015. Candy glazes.
 - (2) Miscellaneous uses:
- 812. Product development and pilot plant uses (own use only).